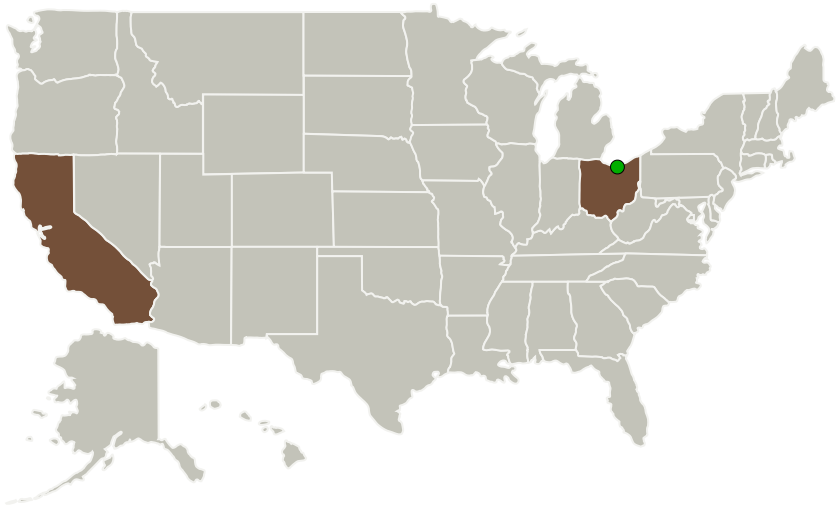
Novel Lithium Ion High Energy Battery, Phase I

Completed Technology Project (2010 - 2010)

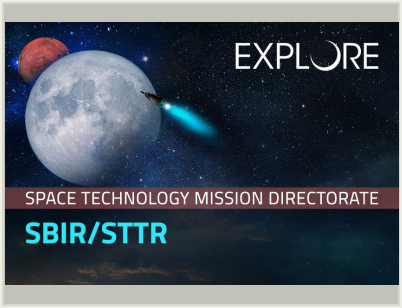
Project Introduction

Under this SBIR project a new chemistry for Li-ion cells will be developed that will enable a major advance in secondary battery gravimetric and volumetric energy density with improved safety and reliability. By the completion of the Phase I effort the feasibility of the chemistry to achieve energy densities in excess of 300 Wh/kg and 600 Wh/l will have been demonstrated in lab cells, corresponding to a TRL of 3 to 4. A Phase II effort will involve further optimization of the chemistry and cell designs and extensive evaluation of 18650 or larger size cells incorporating the new chemistry.

Primary U.S. Work Locations and Key Partners



Organizations Performing Work	Role	Type	Location
Farasis Energy, Inc.	Lead Organization	Industry Small Disadvantaged Business (SDB)	Hayward, California
Glenn Research Center(GRC)	Supporting Organization	NASA Center	Cleveland, Ohio



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Primary U.S. Work Locations	
California	Ohio

Project Transitions

January 2010: Project Start

July 2010: Closed out

Closeout Documentation:

- Final Summary Chart*(https://techport.nasa.gov/file/139292)*

Organizational Responsibility

Responsible Mission Directorate:

Space Technology Mission Directorate (STMD)

Lead Organization:

Farasis Energy, Inc.

Responsible Program:

Small Business Innovation Research/Small Business Tech Transfer

Project Management

Program Director:

Jason L Kessler

Program Manager:

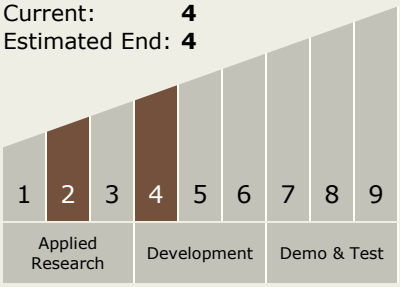
Carlos Torrez

Principal Investigator:

Keith D Kepler

Technology Maturity (TRL)

Start: **2**
Current: **4**
Estimated End: **4**



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Technology Areas

Primary:

- TX03 Aerospace Power and Energy Storage
  - TX03.2 Energy Storage
    - TX03.2.1 Electrochemical: Batteries

Target Destinations

The Moon, Mars, Outside the Solar System, The Sun, Earth, Others Inside the Solar System